

**WHAT IS CLAIMED IS:**

1                   1.       A method for establishing a connection between a receiver and a  
2 transmitter, located at a distance from each other, comprising the steps of:  
3                   sending lightwaves carrying data signals and beacon light from the transmitter,  
4                   using an acquisition receiver for acquiring the lightwaves in the receiver,  
5                   generating acquisition sensor signals from the received lightwaves in the  
6 receiver,

7                   wherein, the lightwaves conducted in the receiver are fed to a beam splitter, an  
8 acquisition sensor and a scanning device, and  
9                   by means of the scanning device, an additional signal is obtained, which is  
10 used to make acquisition easier.

1                   2.       The method in accordance with claim 1,  
2                   wherein light from the scanning is conducted over a first lightwave fiber to a  
3 diplexer, and light is split off from this diplexer and conducted to a detector over a second  
4 lightwave fiber, which provides an additional signal for making acquisition easier.

1                   3.       The method in accordance with claim 2,  
2                   wherein light, which arrives via the first lightwave fiber and the diplexer, is  
3 also conducted to an optical waveguide coupler, in which this light, and light from a local  
4 laser conducted through a third lightwave fiber, are mixed, wherein the mixed light is split  
5 into two parts, each of which reaches a further detector via respective further lightwave fiber  
6 for generating at least one error signal.

1                   4.       A device for establishing a connection between a receiver and a  
2 transmitter, comprising:  
3                   a receiver telescope and a fine alignment mechanism with a beam splitter,  
4 which beam splitter is designed to provide light via optical means to an acquisition sensor, as  
5 well as to a scanning device, and,  
6                   with the aid of the scanning device, both a useful signal, and an additional  
7 signal, which is effective independently of or together with the acquisition sensor signal in  
8 the acquisition phase, are obtained.

2           5.     The device in accordance with claim 4,  
3                 wherein the scanning device is connected via a first lightwave fiber with a  
4     diplexer, downstream of which a detector is connected via a second lightwave fiber and  
5     provides an additional signal for making acquisition easier.

1           6.     The device in accordance with claim 5,  
2                 further comprising an optical waveguide coupler, whose input is connected via  
3     a third lightwave fiber with the diplexer and which, with coherent heterodyne reception,  
4     mixes light arriving from the diplexer and light from a local laser, conducted over a fourth  
5     lightwave fiber, and split into two parts, which reach a detector via a respective further  
6     lightwave fiber for generating at least one error signal.

1           7.     The device in accordance with claim 5, further comprising a first  
2     detector connected with a discriminator, which delivers an additional signal to a system  
3     control.

1           8.     The device in accordance with claim 7,  
2                 further comprising a second discriminator, connected downstream of said  
3     detector, which delivers at least one error signal to said system control.

5           9.     The device in accordance with claim 7,  
               wherein the scanning device is connected to a control, which provides  
               command signals for a discriminator.

10          10.    The device in accordance with claim 4,  
               wherein the receiver telescope is connected to the system control by means of  
               a **CPA** control or an **FPA** control.